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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

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1761

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/765,123	Applicant(s) HOLZSCHUH ET AL.	
	Examiner Adepeju Pearse	Art Unit 1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: It is unclear what "agro-food products" are. Appropriate correction is required.
1. Claim 13 is objected to because of the following informalities: In line 3, the phrase "it has" should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
2. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948);

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and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation a temperature comprised between 200°C and 800°C, and the claim also recites preferably 300°C and 400°C, which is the narrower statement of the range/limitation. Claim 2 recites the broad recitation preheating preferably in at least one specific preheating zone... and more preferably by electrical heating of said zone, which is the narrower statement of the range/limitation.

3. Claims 10-12 provides for the use of a pyrolysis reactor, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 10-12 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim 1 recites, “comprises essentially the steps consisting in” this is not a conventionally used transition phrase in U.S. Patent practice. Appropriate correction is required.

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-9 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Underwood et al (U.S. Pat. No. 4,876,108) in view of Weissman (U.S. Pat. No. 3,012,124) and Wistreich et al (U.S. Pat. No. 3,875,314). With regard to claim 1, Underwood et al disclose an aqueous wood smoke solution for flavoring foodstuffs by heating in an oxygen starved

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atmosphere ground wood or cellulose to between 400°C and 650°C and separating and collecting the water soluble liquid products (abstract). However, Underwood et al failed to disclose a heated rotatable endless screw. Weissman teaches a smoke generator for generating smoke from hard wood chips. It includes a trough of arcuate form having a charging end into which wood chips are fed and a discharging end from which the chip residue is discharged. The trough is heated by electrical resistance elements and an archimedean screw is supported rotatably within the trough to advance wood chips from the charging end to the discharging end. This arrangement increases the operating efficiency of the smoke generator (col 1 lines 8-25). It would have been obvious to one of ordinary skill in the art to modify Underwood et al with Weissman by utilizing a heated rotatable screw in order to increase the operating efficiency of the reactor.

9. With regard to claim 2, Underwood et al disclose that wood is commonly dried and fed to a reactor system (col 1 lines 52-56). However, Underwood failed to disclose preheating in a preheating zone in the reactor. Weissman teaches that a trough of arcuate form having a charging end into which wood chips are fed and a discharging end from which the chip residue is discharged. The trough is heated by electrical resistance elements (col 1 lines 12-15). It would be obvious to one of ordinary skill in the art to expect that the trough would act as a preheating zone for the wood chips and modify Underwood et al with the teachings of Weissman because this would further dry the wood.

10. With regard to claim 3, Underwood et al failed to disclose a heated rotatable endless screw. Weissman teaches a smoke generator for generating smoke from hard wood chips. It includes a trough of arcuate form having a charging end into which wood chips are fed and a

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discharging end from which the chip residue is discharged. The trough is heated by electrical resistance elements and an archimedean screw is supported rotatably within the trough to advance wood chips from the charging end to the discharging end. This arrangement increases the operating efficiency of the smoke generator (col 1 lines 8-25). It would have been obvious to one of ordinary skill in the art to modify Underwood et al with Weissman by utilizing a heated rotatable screw in order to increase the operating efficiency of the reactor.

11. With regard to claim 4, Underwood et al failed to disclose where the smoke produced is condensed. However, Wistreich et al teach a liquid smoke and method for manufacture comprising feeding hardwood such as sawdust in the form of a vibratory conveyor for advancement of the material through an enclosed space heated to a temperature sufficient to cause thermal destruction or degradation of the wood particles. The bottom side of the plate is heated directly or indirectly to an elevated temperature of about 600°C to 750°C for transmission of heat sufficient to cause carbonization of the wood particles from the feed end to the delivery end, after which the burned or charred wood particles fall from the conveyor for disposal (col 2 lines 37-52). In addition, Wistreich et al teach that the fumes, vapors and smoke particles which are given off by the thermal reduction of wood particles are exhausted from the chamber through an outlet for passage into a condensate chamber (col 2 lines 56-60). It would be obvious to one of ordinary skill in the art to modify Underwood et al with Wistreich et al by utilizing a condensation chamber for the smoke produced in order to accumulate the smoke produced.

12. With regard to claim 5, Underwood et al failed to disclose re-injecting pyrolysis gas into the reactor. However, Wistreich et al teach that it is desirable to mount the condenser in communication with and preferably at the top of the reactor for continuous flow of vapors and

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gases exhausted from the top of the reactor to the inlet at the bottom of the condenser in order to enhance yield of materials extracted (col 3 lines 26-43). It would be obvious to one of ordinary skill in the art to modify Underwood et al with Wistreich et al by recirculating the vapors and gases in order to enhance yield.

13. With regard to claim 6, Underwood et al disclose that pyrolysis takes place in an oxygen-starved atmosphere. It would be obvious to one of ordinary skill in the art to expect that the percentage of oxygen present would be extremely low as recited by applicant in order to prevent combustion of the wood particles while heated to elevated temperature.

14. With regard to claim 7, Underwood et al discloses parameters that should be optimized in a pyrolysis method to produce a suitable liquid product for use as liquid smoke including temperatures between 400°C and 800°C (col 6 lines 35-45). It would be obvious to one of ordinary skill in the art to expect that the temperature range would be strictly adhered to in order to optimize the process and produce a suitable liquid product.

15. With regard to claims 8-9, Underwood et al disclose wood or cellulose as a material (abstract).

16. With regard to claim 13, Underwood et al disclose a benzo[a]pyrene content of between 5 and 50ppb (col 5 lines 32-33) and that levels below 0.5ppb can be achieved (col 5 lines 50-51). However, Underwood et al failed to disclose a benzoanthracene content of 20ppb.

Benzoanthracene is a well-known carcinogen to humans and therefore it would be obvious to one of ordinary skill in the art to expect a low content as recited by applicant.

17. With regard to claims 14-15, Underwood et al disclose foodstuffs smoked utilizing liquid smoke (abstract).

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-15 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3-16 of copending Application No. 10/612,972 in view of Weissman (U.S. Pat. No. 3,012,124). Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 recites a process for producing smoke utilized in food products comprising the steps of introducing an organic material, heating the organic material in a chamber between 200°C and 800°C and then removing the consumed organic material and smoke. These steps are similar to claim 1 of the instant application. Claims 2-15 of application #10/765,123 are identical to claims 2-16 of the instant application.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art discloses similar subject matter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adepeju Pearse whose telephone number is 571-272-8560. The examiner can normally be reached on Monday through Friday, 8.00am - 4.30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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